

Notice of Allowability**Application No.**

10/827,207

Examiner

NGOC-YEN T. VU

Applicant(s)

OLSON ET AL.

Art Unit

2622

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the after-final amendments filed 11/19/2008.
2. ☒ The allowed claim(s) is/are 2-7, 10-14, 17-18 (claims are renumbered as 1-13, respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 01/15/09.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Ngoc-Yen T. VU/
Primary Examiner, Art Unit 2622

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Patric Rawlins on 01/15/2009.

The application has been amended as follows:

Claim 5 (Currently Amended) The method of claim 4, wherein the sub-region substantially corresponds to the area of the microscope slide comprising ~~a~~ the specimen.

Claim 7 (Currently Amended) A computer implemented method for determining the optimal focal height for a plurality of objective lens locations in a virtual microscopy system prior to scanning a microscope slide, the virtual microscopy system having an objective lens coupled to a line scan camera and a stage for supporting a microscope slide, the method comprising:

moving the stage in a direction orthogonal to the objective lens;
continuously adjusting the height of the objective lens relative to the stage while the stage is in motion;
scanning an image of an area on the microscope slide by moving the stage in a direction orthogonal to the objective lens, continuously adjusting the height of the objective lens relative

to the stage along a predetermined path while the stage is in motion, wherein the predetermined path is one of sinusoidal, triangular, and saw-tooth, and scanning image data of the linear strip while the stage is in motion and the height of the objective lens is continuously adjusted; ~~and~~

determining a plurality of objective lens locations having the greatest contrast in the scanned image, wherein an objective lens location comprises a planar location on the microscope slide and a height of the objective lens;

combining a plurality of objective lens locations into a non-planar focal surface, wherein an objective lens height on the focal surface at other than the plurality of objective lens locations is estimated; and

adjusting the height of the objective lens, using a processor, according to the non-planar focal surface during subsequent scanning of the microscope slide.

Claim 8 (Canceled)

Claim 9 (Canceled)

Claim 14: line 9, change “the stage” to –a stage–; line 12, change “the linear strip” to –the first linear strip–; line 24, change “the linear strip” to –the second linear strip–.

REASONS FOR ALLOWANCE

The following is an examiner’s statement of reasons for allowance:

Regarding claims 7 and 14, in combination with other elements in the claims, the prior art of record fails to anticipate or make obvious a computer implemented method for determining

the optimal focal height for a plurality of objective lens locations in a virtual microscopy system comprising continuously adjusting the height of the objective lens relative to the stage along a predetermined path while the stage is in motion, wherein the predetermined path is one of sinusoidal, triangular, and saw-tooth; scanning image data of the linear strip while the stage is in motion and the height of the objective lens is continuously adjusted; determining a plurality of objective lens locations having the greatest contrast in the scanned image; combining a plurality of objective lens locations into a non-planar focal surface, wherein an objective lens height on the focal surface at other than the plurality of objective lens locations is estimated; and adjusting the height of the objective lens, using a processor, according to the non-planar focal surface during subsequent scanning of the microscope slide.

Claims 10-13, 2-4, 6 and 17-18 are also allowed as being dependent upon the allow claims 7 and 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NGOC-YEN T. VU whose telephone number is (571)272-7320. The examiner can normally be reached on Mon. – Thurs. from 8:00 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ngoc-Yen T. VU/
Primary Examiner, Art Unit 2622
01/15/2009